AMENDMENTS TO THE SPECIFICATION:

Please amend without prejudice the specification as follows:

Please replace the paragraph beginning on page 1, line 19 of the Specification with the following amended paragraph:

-- It is believed that more of the effort in ME modeling may have been focused on parameter estimation, and that less effort has been made in feature selection since it may not be required for certain tasks when parameter ~~estimate~~ estimating algorithms are sufficiently fast. However, when the feature event space is necessarily large and complex, it may be desirable to perform at least some form of feature selection to speed up the probability computation, to reduce ~~require~~ memory requirements during runtime, and to shorten the cycle of model selection during the training. Unfortunately, when the feature event space under investigation is large, feature selection itself may be difficult and slow since the universe of all the possible feature subsets to choose from may be exceedingly large. In particular, the universe of all possible feature subsets may have a size of $2^{|\Omega|}$, where $|\Omega|$ is the size of the feature event space.--

Please replace the paragraph beginning on page 3, line 23 of the Specification with the following amended paragraph:

-- According to an exemplary feature selection method of the present invention, instead of computing the approximate features gains for all candidate features at each selection stage, which may be time consuming for applications requiring a large feature event space, the exemplary feature selection method only computes the approximate gains for the feature(s) ranked during the current feature selection stage as having the largest gain (i.e. "the top-ranked features") based on models obtained from previous feature selection stages. That is, the exemplary feature selection method only computes the approximate gains for those candidate features positioned to be within a top portion of an ordered list of the candidate features, the size of the top portion being determined dynamically, for example, at each feature selection stage. In this regard, the exemplary feature selection method may be referred to as the selective gain computation (SGC) method and may provide faster feature selection without sacrificing the quality of features selected. For example, an exemplary

SGC feature selection method may run hundreds to thousands times faster than existing incremental feature selection (IFS) algorithms.--

Please replace the paragraph beginning on page 4, line 19 of the Specification with the following amended paragraph:

-- An exemplary method of the present invention is directed to selecting features for maximum entropy modeling, in which gains for candidate features are determined during an initialization stage and gains for only top-ranked features are determined during each feature selection stage, the candidate features are ranked in an ordered list based on the determined gains, a top-ranked feature in the ordered list with a highest gain is selected, and a model is adjusted using the selected ~~using the~~ top-ranked feature.--

Please replace the paragraph beginning on page 5, line 14 of the Specification with the following amended paragraph:

-- Still another exemplary method of the present invention is directed to selecting features for maximum entropy modeling, in which gains of candidate features are computed using a uniform distribution, the candidate features are ordered in an ordered list based on the computed gains, a top-ranked feature is selected with a highest gain in the ordered list, a model is adjusted using the selected top-ranked feature, the top-ranked feature is removed from the ordered list so that a next-ranked feature in the ordered list becomes the top-ranked feature, a gain of the top-ranked feature is computed using the adjusted model, and the gain of the top-ranked feature is compared with a gain of the next-ranked feature in the ordered list. If the gain of the top-ranked feature is less than the gain of the next-ranked feature, the top-ranked feature is repositioned in the ordered list so that the next-ranked feature becomes the top-ranked feature and an order of the ordered list is maintained and the steps of computing the gain of the top-ranked feature, comparing the gain of the top-ranked feature with the gain of the next-ranked feature are repeated. The entire non-initialization steps are repeated until ~~a quantity~~ the number of selected features exceeds a predefined value or a gain of a last-selected feature falls below a predefined value.--

Please replace the paragraph beginning on page 6, line 21 of the Specification with the following amended paragraph:

-- Still another exemplary embodiment of the present invention is directed to a processing arrangement system to perform maximum entropy modeling in which the gain computation arrangement is configured to determine gains for top-ranked features in ~~ascending~~ descending order from a highest to lowest until a top-ranked feature is encountered whose corresponding gain based on a current model is greater than gains of the remaining candidate features.--